ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Preparation for International Telecommunication Union World Radiocommunication Conferences	)))	IC Docket No. 94-31

To the Commission:

REPLY OF COMSAT MOBILE COMMUNICATIONS

COMSAT Mobile Communications

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SUMMARY

COMSAT Mobile Communications ("CMC") believes that the prime objective for the United States at the 1995 World Radiocommunication Conference ("WRC-95") is to ensure that the 2 GHz global Mobile Satellite Service (MSS) bands at 1980-2010 MHz and 2170-2200 MHz allocated at WARC-92 are usable by global MSS systems. Accordingly, we do not agree with those parties that suggest that the date of access for the global MSS bands should remain at 2005 to protect fixed service ("FS") operations. We believe that developments at the Conference Prepatory Meeting ("CPM") held recently in Geneva regarding MSS/FS transition plans give the United States a reasonable basis to support access to the global MSS bands at 2 GHz before the year 2000.

CMC believes that there is a critical need to allocate suitable bands for non-geostationary orbit MSS ("NGSO MSS") feeder links and to make the resulting changes to RR 2613 that are required to facilitate the use of fixed satellite service ("FSS") bands by NGSO MSS systems. The comments of the MSS industry strongly support this position.

There is also agreement among the MSS industry on the need to identify new global MSS allocations at WRC-95. However, as evidenced at the CPM, because of the complex issues involved we do not think it is realistic to expect that action can be taken on such new allocations at the Conference. We believe a more achievable goal at WRC-95 is for the Conference to identify new MSS bands below 3 GHz, to implement a program to study these

candidate bands, and to come back at WRC-97 to allocate the most appropriate bands to new MSS.

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To the Commission:

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COMSAT Mobile Communications ("CMC"), a business unit of COMSAT Corporation, hereby submits its Reply to the comments filed on March 6, 1995, in IC Docket No. 94-31 in response to the Commission's Second Notice of Inquiry ("Second NOI")[1] regarding preparations for the 1995 International Telecommunication Union ("ITU") World Radiocommunication Conference ("WRC-95").

Since comments were filed in this proceeding, CMC and other parties have participated in the WRC-95 Conference Preparatory Meeting ("CPM") held in Geneva, from March 22 to April 5, 1995. The CPM is an important step in the preparation process for the Conference and provides valuable insight concerning the international community's response to the Commission's proposals for the Conference. Accordingly, CMC's Reply, which focuses on the many important Mobile Satellite Service ("MSS") issues to be addressed at WRC-95, also incorporates our observations regarding the CPM and the initial reaction of the world community to the Commission's proposals in the Second NOI on global MSS issues.

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[1] Second Notice of Inquiry, IC Docket No. 94-31, released January 31, 1995, ("Second NOI").

I. INTRODUCTION

The majority of comments on the Second NOI agree with the Commission's premise that WRC-95 should focus on MSS issues as the top priority at the Conference. CMC supports this position and is pleased to see that there is broad agreement within the U.S. MSS industry for the Commission's efforts to identify new global MSS allocations for service and feeder links.[2]

We are disappointed, however, by the lack of support from the Commission and several of the parties to this proceeding for the principle of advancing the date of global availability of the 2 GHz bands from the year 2005 to before the year 2000. We do not understand why the Commission is reluctant to take a pro competitive approach in this case since there is much to be gained in terms of ensuring a robust and competitive global MSS market by the year 2000. As the Commission is aware, the earlier date of access is crucial to the successful deployment of the Inmarsat affiliate ("ICO-P") global MSS system which will compete with the MSS systems operating in the so-called "Big LEO" band at 1.6/2.4 GHz. It is also crucial to resolving the present difficulties being experienced in coordinating spectrum use within the L-band among several international and national systems.

CMC, and the MSS industry, generally support the Commission's proposals for MSS feeder link bands. The comments show that there is

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[2]CMC's Reply responds only to those issues of direct concern to the MSS industry. COMSAT World Systems ("CWS") is filing separate Reply Comments in this proceeding which respond to other, important non-MSS issues on the agenda for WRC-95.

a critical need to allocate suitable bands for non-geostationary orbit ("NGSO") MSS feeder links and to make the resulting changes to RR 2613 that are required to facilitate the use of fixed satellite service bands by NGSO MSS systems.

Finally, based on the discussions at the CPM CMC continues to believe that the world is simply not ready to make new MSS allocations at WRC-95. We believe a more achievable goal for the 1995 Conference is to identify new MSS bands below 3 GHz, to implement a program to study these candidate bands, and to come back at WRC-97 to allocate the most appropriate bands to new MSS.

II. THE U.S. MUST ENSURE THAT THE 2 GHZ BANDS ALLOCATED TO GLOBAL MSS AT WARC-92 ARE AVAILABLE FOR USE BEFORE THE YEAR 2000

The Commission has stated in the Second NOI that it is imperative for the United States to seek as its goal at WRC-95 "to facilitate competitive MSS operations by easing international technical and regulatory constraints." Second NOI at para. 6. Chief among these constraints is the 2005 date of entry into force of the 2 GHz allocations for global MSS systems. If this constraint can be lifted, and if solutions can be found in the domestic 2 GHz proceeding, CMC and its partners in the ICO-P system can proceed with plans to construct an advanced MSS system using the 2 GHz bands allocated at WARC-92. This system, as well as other competing 2 GHz MSS systems, could then use the WARC-92 bands to bring new personalized mobile satellite services to the global marketplace before the end of the century. Early access to the 2 GHz bands would also help to stimulate competition with the Big LEO systems in bringing these new services to the global marketplace.

Given the demand for advanced MSS services, and the actions of the United States to support MSS at previous Conferences, we find it difficult to imagine that the United States would go into WRC-95 with anything less than full support for a proposal which seeks to advance the date of access to the 2 GHz global MSS bands to before the year 2000. Yet this is exactly what several parties -- Iridium,[3] TRW and MSTV -- have urged the Commission to do. CMC does not find the arguments of these parties to be persuasive.

Iridium and TRW will operate MSS systems in the Big LEO bands that also were allocated at WARC-92 for global MSS. Since the Big LEO system owners would not need access to the 2 GHz allocations until after the year 2005 when their second generation systems may be planned, they are not advocates of moving the date forward. MSTV represents the interests of the broadcasters which are the current users of the 2 GHz band in the United States. As their comments demonstrate, the broadcasters are in no hurry to vacate the 2 GHz band to accommodate global MSS operations. The parties self-interests, of course, do not explain why the United States would wish to delay global competition through the use of the 2 GHz bands, particularly when the United States took the position in Footnote 746C at WARC-92 that the same 2 GHz bands would become available in the United States in 1996.

Thus, the real issue here concerns the question of why the United

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[3]Motorola, the principal investor in Iridium, Inc., also filed comments in this proceeding which are substantially similar to Iridium's. See comments of Motorola, IC Docket NO. 94-31, filed March 6, 1995.

States is not taking the same measures to make these globally allocated bands available at an early date for global use. Unless the United States takes a proactive approach to advance the service date, it will continue to appear to other Administrations that somehow the United States is attempting to appropriate these global bands for itself when, in fact, the United States supports global systems and a global information infrastructure. In our view, it is not sufficient to promote the availability of the 2 GHz bands in the United States alone. Nor is such an approach consistent with U.S. policy to establish global MSS networks.

A. Protection of Global FS Operations Should Not Delay the Date of Global Access for MSS at 2 GHz

Iridium argues that the date-of-entry for global use of the MSS bands at 2 GHz should remain at 2005 to protect current FS operations. Iridium supports its position with the statement that it believes nothing has occurred since WARC-92 to change the validity of the rationale that FS operations need protection. Comments of Iridium at 18. This statement is simply not correct.

At WARC-92 the United States led the effort to identify global allocations for MSS that could be usable at an early date. Since then, much of the world, notably the CEPT countries, have adopted the U.S. view that MSS will play a major role in providing future public mobile services and that this will happen before the year 2000. This growing consensus resulted in the agreement at WRC-93 to address ways to facilitate the use of the WARC-92 MSS bands at the 1995 Conference and in the Recommendation that Administrations should cooperate in the coordination consultations for satellite systems proposing to operate

in the 2 GHz global MSS bands.

Last year ITU-R Task Group 2/2 conducted a number of studies investigating the feasibility for NGSO MSS systems to share spectrum with existing FS operations at 2 GHz. These studies indicate that MSS sharing with existing FS systems is feasible in both the uplink and downlink 2 GHz MSS bands at least for the near term when MSS spectrum requirements are more modest. However, in the medium to long term, as MSS requirements increase, sharing will become more difficult, particularly in the uplink bands. Thus, the Task Group recommended that a transition plan be implemented to accommodate MSS and reduce FS operations at 2 GHz.

Most recently at the CPM, the participants agreed to the concept of an "evolving approach" for the gradual introduction of MSS into the 2 GHz bands. This approach would help to alleviate the concerns of developing nations as articulated in TRW's comments opposing an early date of access for global MSS. See TRW comments at 24. The transition plan, as embodied in the new ITU-R Recommendation F.1098, is intended to permit Administrations to consider a number of options to relocate FS systems and accommodate MSS in the 2 GHz bands. The plan contemplates that the upper portion of the 2 GHz global MSS band will be the preferred part of the band for unrestricted access by MSS systems prior to the year 2005. The plan also provides that "priority" should be given to removing FS operations which are eligible for retirement or as part of network modernization efforts.

The preliminary support at the CPM for a MSS/FS transition plan is not intended to prejudge the outcome of WRC-95, but to assure

Administrations concerned about advancing the date of access that measures can be taken to minimize any negative impact on FS systems. As such, the language reflects a compromise between the interests of different Administrations and provides a reasonable basis for the United States to support access to the global MSS bands at 2 GHz before the year 2000.

CMC does not agree with TRW that any attempt by the United States to advance the global 2 GHz implementation date will jeopardize U.S. efforts to allocate additional global MSS spectrum. Comments of TRW at 24. In our view, the WRC-95 Conference would be much more receptive to a U.S. proposal to advance the date of use of a portion of the WARC-92 global allocations, and to lay the basis to study possible new MSS allocations that could be considered at WRC-97 to become available after the year 2005.

Frankly, it would be somewhat illogical for the United States to seek new global MSS allocations at WRC-95 without first attempting to advance the date of access for bands the world has already allocated to global MSS operations. Both efforts are intended to offset the rapidly increasing demand for MSS spectrum worldwide and the expected early saturation of current MSS allocations. Consequently, it makes sense for the United States to pursue both proposals simultaneously.

B. Domestic Issues Concerning the Implementation of MSS in the United States Should Not Delay the Date of Global Access for MSS at 2 GHz

MSTV and TRW argue that the heavy usage of the 2 GHz bands by the broadcast auxiliary services ("BAS") precludes the viability of these bands even for domestic MSS operations, at least until the complex

issues regarding the transition of domestic BAS licensees at 2 GHz can be resolved. Comments of TRW at 22-24; MSTV Comments at 12-14. CMC agrees that electronic news gathering ("ENG") operations are not compatible with MSS operations at 2 GHz and that the BAS/MSS transition issues require careful consideration by the Commission in its domestic 2 GHz allocation proceeding. While we are not optimistic that these domestic issues can be resolved before WRC-95, we do believe that a combination of short term and long term solutions can create sufficient usable spectrum for MSS at 2 GHz to implement global MSS operations in these bands before the year 2000.

CMC is puzzled by MSTV's further suggestion that there is no need to advance the effective date for implementation of the 2 GHz global MSS bands until the United States has resolved domestic issues related to the implementation of the 2 GHz MSS allocations in the United States. While we agree that domestic allocation issues need to be resolved promptly by the Commission, any effort at WRC-95 to accelerate access to the global MSS bands will have no impact on the availability of these bands within the United States. MSTV's argument ignores the action already undertaken by the United States at WARC-92 (in Footnote 746C) to provide for U.S. access to the MSS bands at 1970-2010 MHz and 2160-2200 MHz in 1996. The Commission has not proposed to change this action in the Second NOI. Indeed, the Commission's efforts to commence a proceeding to address the domestic 2 GHz allocation issues demonstrates its commitment to proceed to implement MSS in the United States in a timely manner consistent with Footnote 746C.

Finally, we strongly disagree with TRW's suggestion that the United States should consider deferring the date of access for 2 GHz MSS in the United until 2005. Comments of TRW at 24-25. TRW's suggestion flies in the face of U.S. efforts over the past several years to advance the dates of access for the 2 GHz MSS bands and to secure the earliest possible implementation date for MSS in the United States. Moreover, if the United States were to ask the Conference to move back the U.S. date of entry for the 2 GHz bands, the U.S. position in support of MSS would be seriously undermined and the five years of work on the part of the U.S. government and the U.S. industry to find suitable spectrum for MSS at 2 GHz would be wasted.

III. MSS FEEDER LINKS

The Commission received numerous comments concerning feeder links for NGSO MSS systems. Also, feeder links have been a major activity in IWG-4 of the Commission's IAC in preparing for WRC-95. Moreover, at CPM, feeder links were a major topic of discussion and the summary table of candidate bands for feeder links will be forwarded to the WRC-95 for its use in determining which bands to designate as feeder link bands.[4] This action reflects the importance of these issues and the urgency that the MSS industry places on the need to obtain sufficient spectrum in appropriately designated bands for feeder links at WRC-95.

While CMC agrees for the most part with the comments filed in response to the Second NOI regarding feeder links, we have several

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[4]See Report of the Conference Preparatory Meeting for WRC-95 and WRC-97, CPM 95/118 April 4, 1995, Table 15, at 68 ("CPM Report").

specific points that we believe the Commission should take particular note of in making its determinations for the final U.S. proposals to WRC-95. We will make these points for the specific bands under consideration.

A. Feeder Link Proposals at 5000-5250 MHz and 6725-7075 MHz

The 5000-5250 MHz/6725-7075 MHz bands are the prime bands sought by CMC for the ICO-P system. Because of its advanced system design, the ICO-P system will likely require only 150 MHz of spectrum for feeder link operations in the uplink bands at 5100-5250 MHz and downlink bands at 6925-7075 MHz. However, we can support Loral's and Constellation's proposal for 200 MHz of spectrum within these bands. See Comments of Loral at 12; Comments of Constellation at 7.

In our view, Loral's comments present a comprehensive evaluation of the feeder link requirements and issues from a global perspective and a good review of the work that has been carried out in the IWG-4 feeder link group. Studies conducted by the ITU-R TG 4/5 and TG 8/3 show that feeder link operation in the 5 GHz band is feasible, particularly in the earth-to-space direction without causing harmful interference to aeronautical radionavigation service, including microwave landing systems ("MLS"). This is a key point since, there is a potential for only 130 MHz of non-overlapping, contiguous spectrum that could be used for NGS MSS feeder links on a non-shared basis.

We appreciate the concerns of the aeronautical community that the feeder link bands should not overlap with aeronautical bands and we believe that every effort should be made to minimize this overlap.

However, CMC is convinced by the results of the studies undertaken that the aeronautical operations in this band will not suffer harmful interference or be unduly constrained.

We also agree with Loral and Constellation that NGSO MSS feeder links should be excluded from the provisions of RR 2613 in bands where reverse direction transmission is used in order to protect the Fixed Satellite Service ("FSS"). See Comments of Loral at 12; Comments of Constellation at 7.

CMC is sympathetic to Constellation's desire to relax the power flux density ("pfd") levels specified in MOD 2567(b) in the Second NOI in this band. See Comments of Constellation at 8. However, based upon the experience at the CPM, it is possible that countries having extensive fixed service operations in the 6-8 GHz band may propose even more stringent limits (e.g. -158/-148 dB (W/m 2/4 KHz). In our view, the United States will be in a better negotiating position if the Commission maintains its support for the dual limits specified in the CPM Report of -154/-144 dB (W/m 2/4 KHz). CPM Report, at 58.

MCHI urges the Commission to expand the allocation for NGSO MSS feeder link operation to include all 350 MHz of the 6725-7075 MHz band. See Comments of MCHI at 7-8. For several reasons, CMC can not support this proposal. Since it has been shown that two or more NGSO MSS systems can share these feeder link bands, we believe that to the extent possible, the U.S. proposals should be consistent with the CPM Report which recommends that when sharing is feasible, an allocation

of 200 MHz in each direction is appropriate.[5] Also, MCHI's proposal would exceed the FSS allocation of 300 MHz in the FSS allotment band in Appendix 30B of the ITU Radio Regs. In short, we see no justification for this magnitude of spectrum to be designated for feeder link use in this band.

B. Feeder Link Proposals at 17.7-20.2 GHz and 27.5-29.5 GHz

TRW proposes in its Comments that the United States re-introduce proposals for certain segments of the Ka band which were considered and dismissed during the preparatory process. Comments of TRW at 15. TRW does not provide any new information now that would cause the Commission to review this matter and we, therefore, oppose this proposal.

Also we disagree with TRW's suggestion that 500 MHz in each direction is needed for NGSO MSS feeder link operations. We maintain the position taken in our Comments that sharing is possible among the NGS MSS feeder link systems and that 200 MHz is sufficient in this band. See CMC Comments at 16.

CMC supports TRW's proposal for reverse direction transmission in the 18.8-19.7 GHz band. Comments of TRW at 18. However, again we believe that 200 MHz is sufficient and that this band could be paired with 200 MHz in the 15.4 - 15.7 GHz band.

C. Feeder Link Proposals at 10.7-10.95 GHz and 11.2-11.45 GHz

CMC notes the concerns of AT&T on the possible usage of the 10.7-10.95 GHz and 11.2-11.45 GHz bands for NGSO MSS feeder links in the

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[5]See Comments of CMC concerning the USA CPM Doc No. 27, In-line Interference Between the Feederlinks of Non-GSO Constellations, February 24, 1995 at 16.

"Reverse Band Mode" (or in opposite direction from Fixed Satellite Service usage) because these bands are heavily used by fixed services in the United States. Comments of AT&T at 2. CMC points out that the CPM has recently proposed two distinct sets of pfd limits to protect fixed service from downlink emissions of NGSO MSS satellites operating in the reverse band mode: 1) in bands heavily used by GSO/FSS; and 2) in bands lightly used by GSO/FSS in other direction. However, the Ku-bands of concern to AT&T are WARC-88 Allotment Plan bands and are certainly one of the most lightly used bands in all of the FSS allocations. Therefore, it is not likely that the fixed service would have to share these bands with both the GSO/FSS systems and the NGSO MSS feeder link networks. In any event, the CPM has concluded that sharing would be feasible between fixed service and NGSO MSS feeder links.

Finally, CMC disagrees with Hughes' comments that there is no technological reason why any of the Big LEO applicants cannot use the bands below 17.7 GHz for feeder links. Comments of Hughes at 5. CMC notes that the design of NGSO MSS systems is extremely complicated and involves a very large number of system tradeoffs to be made in order to arrive at a final design. This point is directly evidenced by the fact that the design of each of the Big LEO systems proposed to date is quite different. In view of this, CMC does not consider it reasonable to assume that the Big LEO applicants which are designing for use of the 20/30 GHz bands, or any particular band for that matter, could simply re-design their systems to operate in another band. A change of band would have a major ripple effect throughout

the Big LEO system design.

CMC also takes issue with the comment made by Hughes that Big LEO systems, as currently proposed, make it difficult if not impossible for GSO systems and other NGSO systems to share the spectrum on a co-directional basis. Comments of Hughes at 11. In fact, extensive sharing studies for the case of co-directional use with Ka-band by NGSO MSS feeder link systems and GSO/FSS systems have been undertaken within ITU-R TG 4/5. The results of all of these studies indicate that, at least for Ka-band, NGSO MSS feeder link systems and GSO/FSS systems can share the same frequency band co-directionally.

Finally, as was stated in CMC's original comments to the Second NOI, CMC shares Hughes' concern about the possible loss of an excessive amount of Ka-band FSS spectrum to NGSO MSS systems. CMC Comments at 16.

IV. PROPOSALS FOR NEW AND MODIFIED MSS SPECTRUM BETWEEN 1 AND 3 GHZ

CMC strongly believes that, with all the developments of the past five years, additional MSS spectrum between 1 and 3 GHz will eventually be needed to augment the MSS allocations made at WARC-92 in the 1.6/2.4 GHz and the 1.9/2.1 GHz MSS bands. The need for MSS spectrum in the 1-3 GHz range has been well documented, not only within the FCC Industry Advisory Committee ("IAC"), but also within the ITU-R study groups and most recently at the CPM in Geneva.

Indeed, except for one item, there was very little controversy at the CPM in approving the section of the CPM Report dealing with projections of spectrum requirements for MSS above 1 GHz through the year 2005. CPM Report at 69-72. The CPM Report concludes that total

"minimum" likely spectrum requirements range from around 150 MHz (2 x 75 MHz) to 300 MHz (2 x 150 MHz) by the year 2005. CPM Report at 70. The Report also states that considering the current MSS allocations, which total about 200 MHz, and the many regulatory and date of entry constraints associated with the current allocations, there is unlikely to be sufficient spectrum available from the years 2000 to 2005 to accommodate MSS requirements.

The one item in the Report that did generate numerous negative comments at the CPM is the very point that CMC made in its initial comments. That is, the world is simply not ready to make new MSS allocations at WRC-95. Many Administrations, particularly in the developing countries, have their hands full just trying to realistically accommodate the MSS allocations mandated by WARC-92. In the checklist of options to increase the amount of usable spectrum for MSS, the CPM Plenary appeared to have the most trouble with the items proposing a reduction of the regulatory constraints on existing MSS allocations and a limited allocation of new MSS bands without constraints. Informal discussions with members of numerous foreign delegates have only confirmed CMC's view that the world is not ready to make new MSS allocations at WRC-95. Indeed, draft proposals to WRC-95 from individual countries, and groups of countries such as CEPT, make no mention of new MSS allocations above 1 GHz.

Also, we note, that there is a dearth of technical material pertaining to the sharing of MSS with incumbent services such as Fixed Service. Absent this technical foundation, it is highly doubtful that the United States can sustain any interest in its new MSS allocations

proposals at WRC-95. In our view, what the United States may be able to accomplish at WRC-95 is to target certain band segments for further sharing studies within the ITU-R and to include a list of the most likely bands for review at WRC-97. The 1997 Conference, then, would be able to make limited MSS allocations to relieve the projected saturation of the WARC-92 MSS bands sometime between the years 2000 and 2005.

A. Proposals for Additional MSS Spectrum at 2 GHz

The Commission proposed in Table 5 of the Second NOI to extend the 2 GHz MSS allocations from the bands originally allocated in WARC-92 (1980-2010/2170-2200 MHz) to the extended bands at 1985-2025/2165-2200 MHz. See Second NOI at 35. The Commission indicated that such an adjustment was necessary to compensate for the 20 MHz of spectrum at 1970-1990 MHz which the Commission had allocated to PCS.

The comments of the MSS parties indicate that there is a broad consensus within the U.S. MSS industry for the idea of expanding the 2 GHz MSS allocation some 15 MHz in the uplink (above 2010 MHz) in order to compensate for the "dent" made by PCS in the lower band at 1970-1990 MHz. See Comments of Iridium at 16-17; Comments of Loral at 30; Comments of Constellation at 9-10; Comments of AMSC at 8-9; Comments of TRW at 20. Only TRW cautions that the potential viability of these bands for MSS is sufficiently uncertain that they may not offer an effective solution to the long-term needs of MSS licenses. See Comments of TRW at 20.

As CMC indicated in our Comments, we do not believe that it is

reasonable to expect that WRC-95 will act on the Commission's proposed new MSS allocations. Since the CPM, even the Commission must, at this juncture, recognize the opposition internationally to its proposal for extending the 2 GHz MSS allocations. CMC notes that the CPM Report discusses, in paragraphs 4.1-4.5, the implications for MSS sharing with the Fixed Service and considers the current and newly devised fixed service channelling plans developed under the ITU-R. The CPM Report suggests that there may be up to 29 MHz and 16 MHz of spectrum, respectively, that is free of overlap with MSS uplink and downlink bands.

Recommendation ITU-R F.1098 identifies a new channeling plan for FS systems in the 2 GHz range. This new Recommendation provides a means to facilitate alternative spectrum usage by the FS where sharing is deemed not practical. This spectrum plan contains both "core" and "extended" components. The core portion does not overlap with the MSS allocations, while the extended portion is to be used only where sharing between the MSS and FS is deemed feasible, generally in the MSS downlink bands.

Finally, the CPM Report describes an evolving approach to the introduction of MSS, whereby appropriate transitional arrangements could be prepared for a phased entry of MSS systems. See CPM Report at para. 4.5. This approach takes advantage of the new channeling plan, as well as the older F.283.5 and F.382-6 plans in countries observing those terrestrial channel plans. In this way, developing countries need not be forced to cease operations on their FS systems, just because of a change in the date of entry in the 2 GHz bands.

In CMC's view, the CPM Report indicates that it may be possible to extend the migration time-frame for these fixed systems beyond even the year 2005, for example, in the MSS downlink band. At the same time, the upper portion of the band at 2184-2200 MHz, which represents the preferred, "core" portion of the band, would be cleared for unconstrained access by MSS earlier than 2005.

Unfortunately, all these "hopeful" signs of flexibility in the international community do not take into account the Commission's proposals for 2010-2025 MHz. In fact, we believe that the MSS/FS sharing problems will be much more extensive under the Commission's 2 GHz extension proposal than for the original WARC-92 MCC allocations.

If Commission proceeds with its proposal for new MSS allocations, it would be ignoring international ITU-R accords that have been 3 years in the making by advocating the 2 GHz MSS band extension at 2010-2025 MHz. Furthermore, while the U.S. MSS industry may find it logical, the rest of the world is not impressed with the Commission's decision to allocate the lower 10 MHz of the global MSS band and 10 MHz of the Region 2 MSS spectrum to PCS. Many Administrations are now asking why they should pay a double penalty for U.S. domestic radio policies: first, by having to give up the 1970-1990 MHz MSS uplink band and, second, by having to ignore channelization plans which were developed to avoid the problems of MSS/FS band sharing in the original WARC-92 2 GHz MSS allocations.

B. Proposals for New MSS Spectrum at 1675-1710 MHz

CMC notes that the MSS industry is very supportive of the Commission's and the IAC's recommendations that the United States

propose the 1675-1710 MHz band as a candidate global MSS uplink band at WRC-95. See Comments of Loral at 29-30; Comments of Iridium at 13-16; Comments of AMSC at 11-12; Comments of TRW at 9-12. The fact that there is a nearly complete internatonal record on various sharing scenarios between MSS and the meteorological-satellite ("MetSats") and meteorological-aids ("MetAids") services which operate in the 1675-1710 MHz band means that the United States would likely receive a considerable level of support from other ITU administrations on this one additional MSS allocation proposal.

Yet, as we noted in our Comments, it is a bit difficult to see how WRC-95 would take action on allocating the 1675-1710 MHz band worldwide to MSS, without consideration of a companion downlink band. For this reason, we suggested that some portion of the "Columbus" band at 1492-1525 MHz, allocated in Region 2 for MSS downlink, might be considered by the United States as a global downlink band, in order to balance the U.S. proposal for MSS in the two transmission directions. CMC Comments at 19-22.

Iridium goes even further then the Commission's proposal by calling for the deletion of Footnote 735A, which currently protects MetSats and MetAids services. Comments of Iridium at 13-16. Iridium argues that unless Footnote 735A is deleted, future MetSats and MetAids systems may well be developed using techniques that inhibit fair sharing of the spectrum. Thus, these systems will be able to avoid the inconvenience of coordinating with MSS systems. CMC believes that Iridium's suggestion to delete Footnote 735A is probably more than WRC-95 will be willing to consider. It may be more

realistic to seek to delete this footnote at WRC-97.

AMSC's Comments indicate that part of the 1675-1710 MHz band may be available in the near future, anyway, since sharing is currently feasible between MSS systems and MetSats systems. Comments of AMSC at 11-12. Over time, the entire band may be available for MSS, as MetAids systems are re-engineered to avoid drifting from assigned frequencies. In our view, AMSC seems to have a reasonable approach, which is certain to be more acceptable to the meteorological community than Iridium's proposal. AMSC's option also complements CMC's proposal that the United States pursue only a portion of 1492-1525 MHz as a companion downlink band, perhaps just the 10 MHz at 1515-1525 MHz, to pair with uplink MSS operations at 1675-1710 MHz.

We note that TRW proposes a somewhat novel plan to possibly pair the 1675-1710 MHz band with the 2165-2200 MHz band. Comments of TRW at 9-12. CMC strongly opposes this proposal as it would completely undo the WARC-92 allocation for a global MSS uplink at 1980-2010 MHz paired with a global MSS downlink at 2170-2200 MHz.

Finally, Constellation suggests that consideration should be given to upgrading the secondary Region 2 downlink MSS allocation at 2120-2160 MHz to a primary footnote allocation, which could then be matched with the primary Region 2 uplink MSS allocation at 1675-1710 MHz. Comments of Constellation at 10. Constellation's approach has merit and is worth further scrutiny by the Commission.[6] As with the

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[6]CMC believes that the ITU-R channelization plans for the entire 2 GHz spectrum should be reviewed by the Commission to see whether MSS operations at 2120-2160 MHz will avoid overlap with the GO/RETURN channels of FS in that part of the spectrum.

other proposals discussed above, the search for the companion downlink band to the 1675-1710 MHz band uplink should be made on the basis on minimizing interaction with terrestrial FS systems.

C. Elimination of Primary MSS Allocations at 1970-1985 MHz

Along with its proposed new MSS allocations, the Commission is seeking to change the status of the Region 2 MSS allocation at 1970-1980 MHz from primary to secondary and to eliminate the primary MSS allocation in the 1980-1985 MHz band in all three ITU regions. The MSS industry has generally embraced the Commission's proposals to reconfigure the worldwide MSS allocations made at WARC-92.

CMC agrees with the other MSS proponents that modification of the WARC-92 global MSS allocations is necessary to accommodate the Commission's allocation of the 1970-1990 MHz band to terrestrial PCS. We disagree with those MSS parties, however, which believe that the primary MSS allocations at 1970-1985 MHz must be eliminated as part of the United States proposal for new global MSS allocations. See Comments AMSC at 8-9; Comments of Iridium at 17. Nor can we support Loral's related suggestion that the United States should consider deleting the full 20 MHz allocation in the band 1970-1990 MHz. Comments of Loral at 30.

As we indicated in our Comments on the Second NOI, even though the MSS spectrum at 1970-1985 MHz may not be usable by MSS on a primary basis in the United States, other countries in Region 2 presumably still could make use of this allocation. See CMC Comments at 22-25. Moreover, the 1980-1985 MHz band, which was allocated at WARC-92 as a primary MSS band in all three ITU regions, certainly will